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~~BRIEF FOR APPELLANT~~ JOINT APPENDIX

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

United States Court of Appeals
For the
District of Columbia Circuit
FILED
FEB 27 1957
Joseph W. Stewart
Clerk

No. 13,675

PETROCARBON LIMITED,

Appellant,

v.

ROBERT C. WATSON,
Commissioner of Patents,

Appellee.

APPEAL FROM THE JUDGMENT OF THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

RALPH H. HUDSON
700 10th St., N.W.
Washington 1, D.C.
Attorney for Appellant

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29 THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF COLUMBIA

[Filed April 15, 1954]

PETROCARBON LIMITED, 170 Piccadilly, London, W. 1, Plaintiff,	:	
v.	:	CIVIL ACTION NO.
ROBERT C. WATSON, as COMMISSIONER OF PATENTS of the UNITED STATES, Washington 25, D.C., Defendant.	:	1602-54

COMPLAINT, ISSUANCE OF PATENT

TO THE HONORABLE, THE JUSTICES OF THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA:

The plaintiff, by its attorney, Henry C. Parker, complaining of the defendant, respectfully shows this Court and alleges:

1. The plaintiff, PETROCARBON LIMITED, is a foreign corporation, duly organized and existing under and by virtue of the laws of England.

2. The defendant, ROBERT C. WATSON, is the Commissioner of Patents of the United States, a legal resident of the District of Columbia, and is sued as Commissioner of Patents of the United States.

3. The jurisdiction of this Court depends upon the patent laws and particularly Title 35, United States Code, sections 101, 102 and 145.

4. That heretofore, and on September 8, 1948, plaintiff's assignor, Michael Mojzesz Szwarc, duly filed in the United States Patent Office an application for a patent on his invention entitled "PRODUCTION OF NEW

30 AND USEFUL POLYMERS", which application was given the Serial Number 48,339.

5. That the said application was filed in accordance with the laws of the United States and the Rules of the Patent Office and fully complies with the provisions of Title 35, United States Code, sections 111 and 112.

6. That the inventor-assignor, Michael Mojzesz Szwarc, duly assigned in writing all his right, title and interest in and to said application to the plaintiff, PETROCARBON LIMITED, which assignment was duly recorded in the United States Patent Office on or about September 18, 1948 and is still in effect.

7. That the plaintiff has duly prosecuted the said patent application for the said invention in accordance with the laws of the United States and the Rules of the Patent Office.

8. That the defendant, Robert C. Watson, during the prosecution of the said application, in his Official Capacity, through his agents, servants and employees, namely through the Primary Examiner, finally rejected and refused to allow to plaintiff the following claims 54 and 55:

> 54. A process for the production of a solid polymer of high thermal stability which is resistant to sulfuric acid and insoluble in many organic solvents, which comprises heating hydrocarbon vapors consisting essentially of paraxylene at a temperature of about 860° C for a period of from about 0.3 to 0.4 second and under a pressure of from about 8 to 10 mm. of mercury, cooling the resulting vapors to a temperature at which a solid polymer is deposited which does not soften even when heated to about 270° C, and recovering the said solid polymer.
>
> 55. A solid polymer produced by the process of claim 54.

9. That subsequent to said refusal on the part of the Primary
31 Examiner, plaintiff duly appealed to the Board of Appeals of the United States Patent Office, on or about February 18, 1953, in accordance with the patent laws and the Rules of the Patent Office, and that the defendant, through his agents, servants and employees acting as said Board of Appeals, affirmed the rejection of the said claims in an opinion dated January 29, 1954.

10. That thereafter plaintiff, on or about February 27, 1954, petitioned said Board of Appeals for reconsideration of its denial of claims to plaintiff but said petition was denied in a decision dated March 18, 1954.

11. That the said petition for rehearing was filed in the Patent Office within thirty days after the date of the decision of the Board of

Appeals and that the present civil action has been instituted within thirty days after the date of the action of the Board on the said petition, as provided for by Title 35, United States Code, section 145 and by Rule 304 of the Patent Office.

12. No appeal has been taken from said decision of the Board of Appeals to the United States Court of Customs & Patent Appeals, and no such appeal is pending or has been decided, and plaintiff accordingly has the right to file this civil action under Title 35, United States Code, section 145.

13. That the sole ground relied upon by both the Primary Examiner and the Board of Appeals in refusing to allow plaintiff's claims was that the original disclosure of plaintiff's application does not comply with the provisions of Title 35, United States Code, Section 112, first paragraph, with respect to a statement of utility of the subject matter of the claimed
32 subject matter.

14. Plaintiff does not agree with this contention by the Primary Examiner and the Board of Appeals and maintains that plaintiff's original application, Serial Number 48,339, contains a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and that it sets forth the best mode contemplated by the inventor of carrying out his invention; all as required by the first paragraph of Section 112 of Title 35, U.S. Code.

15. That plaintiff further states that the invention disclosed in its patent application, Serial Number 48,339, and defined in the claims set out in paragraph 11 hereof, is new, useful and was not known or used by others in this country prior to the invention thereof by Michael Mojzesz Szwarc and not patented or described in any printed publication in this or any foreign country before his invention thereof or more than one year prior to his application for patent therefor, and not in public use or on sale in this country for more than one year prior to the said application and not patented in any foreign country by him or his legal representatives or assigns on an application filed more than twelve months prior to said

application for United States patent and has not been abandoned.

16. That the subject matter of said application of Michael Mojzesz Szwarc and the questions of law and of fact here involved are of great importance and value to the trade and commerce of the United States.

33 17. WHEREFORE the plaintiff prays that this Honorable Court may adjudge that plaintiff, as assignee of Michael Mojzesz Szwarc, is entitled, according to law, to receive a patent for the invention described in said application and defined in said claims, and that this Honorable Court may authorize and direct the Commissioner of Patents to issue such patent to plaintiff, as assignee of said Michael Mojzesz Szwarc; and that the Court grant unto this plaintiff such further relief as the Court may deem just.

PETROCARBON LIMITED,

By . . . . . .

Attorney for Plaintiff,
1056 National Press Building,
Washington 4, D. C.,

* * *

[Filed May 14, 1954] [Patent Dept., May 18, 1954]

E.L. Reynolds, Solicitor,
United States Patent Office,
Washington 25, D. C.
Attorney for Defendant.

34 ANSWER TO THE COMPLAINT

To the Honorable the Judges of the United States District Court for the District of Columbia.

1. The defendant admits the allegations of paragraph 1 of the complaint.

2. He admits that, as Commissioner of Patents, his official residence is in the District of Columbia and that he is sued in his official capacity.

3. He admits the allegations of paragraph 3 as to 35 U.S.C. 145,

and denies them in all other respects.

4. He admits the allegations of paragraph 4.

5. He admits the filing of the application as alleged in paragraph 5.

35 6, 7, 8, 9, 10, 11, 12, 13. He admits the allegations of paragraphs 6 to 13, inclusive.

14, 15. He denies the allegations of paragraphs 14 and 15.

16. He is not informed as to the allegations of paragraph 16.

17. Paragraph 17 being a prayer, no answer is made thereto.

FURTHER ANSWERING, the defendant states that the plaintiff is not entitled to a patent containing either of the claims set forth in the complaint for the reasons given and in view of the references cited in the Examiner's Statement and decisions of the Board of Appeals in the plaintiff's application here involved and in view of the following additional reference:

Journal of Polymer Science, Vol. 6, Jan.-June, 1951, pages 319-329.

Profert of copies of the said statement, decisions, and references is hereby made.

Respectfully submitted,

/s/ E. L. Reynolds

Solicitor, U.S. Patent Office,
Attorney for Defendant.

May 13, 1954.

36 I hereby certify that a copy of the foregoing Answer to the Complaint was mailed today, May 13, 1954, to the attorney for plaintiff, Mr. Henry C. Parker, 1056 National Press Building, Washington, D.C.

/s/ E. L. Reynolds

Solicitor.

[Filed January 7, 1957]

EXCERPTS FROM TRANSCRIPT OF PROCEEDINGS

Washington, D.C.,

Tuesday, April 17, 1956.

The above-entitled action came on for hearing at 11:15 o'clock. a.m., on Tuesday, April 17, 1956, in the United States District Court for the District of Columbia.

BEFORE:

HONORABLE MATTHEW F. McGUIRE, Judge.

* * * * * *

PROCEEDINGS

THE DEPUTY CLERK: Petrocarbon vs. Watson, Civil Action No. 1602-54.

MR. HUDSON: Your Honor, this is an action against the Commissioner of Patents under what we used to refer to as Section 4915 under which Your Honor will pass on whether the plaintiff is entitled to a patent which has been refused by the Patent Office.

This case, however, is different from the usual case of that kind which comes up. Most of them involve questions of invention over prior art. This one, however, is something quite different, and so far as I know brings up the question which has not come up before this Court before. That is a very technical question in the sense of strict compliance with the literal terms of the statute. I have the text here if Your Honor would care to look at it. It is at the bottom of page 2, Section 145 of the Patent Statute.

THE COURT: In other words, the sole reason for the rejection of the claim is based on the Examiner's holding that the original description of this case does not comply with the statute with respect to the statement of the utility of the claimed subject matter.

MR. HUDSON: That is the only matter involved here, and the statute to which they refer appears right below that.

THE COURT: Now, let me ask you this question: Am I to conclude from what I have read of the statute, from what you have said, that if there was compliance there would be invention?

MR. HUDSON: Invention has been conceded insofar as a differentiation from the prior art is concerned.

MR. BEHRENS: That is right, Your Honor.

MR. HUDSON: Patentability depends only on whether the original description in this specification complies literally with the statute.

THE COURT: Then it comes down to a question of invention being admitted, it is a case that comes down merely to a question of semantics, doesn't it?

MR. HUDSON: Practically that. The words of the specification are -- it is a question of whether they amount, as stated and as required by the statute, whether they amount to a written description of the manner of use of the invention.

THE COURT: The statute says, and I assume there is no question about this. Section 112, U. S. Code, reads in part as follows:

> "The specification shall contain a written description of the invention, and of the matter and process of making and using in such full, clear and concise and exact terms as to enable any person skilled in the art to which it pertains, or
4 to which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention."

Now, addressing myself to the emphasis which has been added in this, I am assuming, and please correct me if my assumption is not correct. Certainly there has been a written description of the invention, and that presumably is understandable, and there is no difficulty there.

MR. BEHRENS: That is the issue, Your Honor.

THE COURT: You don't mind me doing this, because it helps me out. Your specification states it shall contain the written description of the invention and the matter of process of making and using it, and "using it" is underlined, so I thought possibly that might be the sixty four thousand dollar word.

MR. BEHRENS: There is one difficulty, Your Honor, with this question, whether or not you can separate the disclosure of your invention from the disclosure of utility as required by the statute.

THE COURT: We know where we are.

MR. HUDSON: That is the issue, Your Honor. We have the file of the application here which would be, in the normal course of event, the first exhibit.

THE COURT: Then the only question involved here would be the question of construction. The statute says one thing. The claims say another, and it is for me to resolve the situation from the viewpoint as to whether or not the claim conforms to what the statute says the specification shall contain.

MR. HUDSON: If Your Honor please, may I make just one correction? It is not the claim, it is the description in the specification which is in issue here. If you will look at the top of the page there is a little quotation there from the specification which is, in substance, what we rely on here.

We have made tests in accordance with the statement which is quoted from the specification, and we have exhibits to show that the processes described there works and produces useful articles and, therefore, we say that the statement itself is an entire compliance with the statute.

THE COURT: Well, now, what is the invention?

MR. HUDSON: The invention is in the making of what we would call a resin or plastic, or polymer, to give it a technical term. There is a certain starting material used that is subjected to heat and temperature, and it produces a vapor, and changes take place in that vapor. We do not need to go into the exact chemical nature of those changes, but this vapor will condense on a cool surface, just like steam in the kitchen will condense on the cold windowpane, and when it does that it polymerizes, is the term which is used, which means that the individual molecules in this vapor unite with one another and form a solid film on that surface. That is what the process is, and that is the summation of it in this quotation at the top of this page.

The polymerization, which is the union of the molecules to make bigger ones than before and, therefore, a heavier and solid material, that takes place spontaneously when the vapor condenses on the cold surface.

THE COURT: Then it is your position that that statement in the specification complies with the provision of the statute?

MR. HUDSON: Because it does exactly what the statute requires. It tells how to use the invention.

THE COURT: You say, and you have emphasized by interlineation here. It shows how to use the invention, but let me ask you this: Does that, referring to the language you have just quoted, refer to the legal description of the invention?

MR. HUDSON: There is more, of course, but I only picked this part out with reference to utility, how to use it.

THE COURT: With reference to the utility?

MR. HUDSON: With reference to how to use it, yes, sir. That is the complete description.

7 THE COURT: What do you understand is the quarrel with the Patent Office with what the description says?

MR. HUDSON: They had a case down here some years back in the Court of Customs and Patent Appeals which also had to do with one of these synthetic resins, but all that that did, all that that specification disclosed, was to make a certain material but did not say a single word what to do with it when you got it. The Court of Customs and Patent Appeals in that case held that there had to be some indication of the use of the patented invention. They were relying on this statute when they did it.

The Patent Office, for reasons which we think were erroneous, has taken the view that this case falls into that same category.

THE COURT: Now, addressing yourself to the language which appears on this trial memorandum, and which is described in page 2 of the Szwarc application, wherein does this application indicate that polymerization takes place, and indicate its use?

MR. HUDSON: Because one of the things we do with this polymer is to coat a material.

Let me have one of those samples.

For example, if we had say a piece of pipe, which needs protection from corrosion. One of the properties in this polymer, as stated in

the specification, is resistance to attack by acid. In other words, you
8 put it on top.

THE COURT: Yes, I understand that, but what is the effect?

MR. HUDSON: We do it exactly as stated there. The cool surface is the pipe. The cooling may take place in contact with the cool surafce. The polymer is deposited on there in the form of a film.

THE COURT: Thereupon your position is that the specification conforms with the statute?

MR. HUDSON: This is to show that the plaintiff puts it on there in the form of a film.

THE COURT: Now, let me interrupt you. Wherein does this fail?

MR. BEHRENS: It fails because it suggests no actual usage for this invention.

THE COURT: Well, it says the cooling may take place in contact with the cool surface on which the polymer is deposited in the form of a film.

MR. BEHRENS: That, Your Honor, we interpret as disclosing merely experimental detail without suggested use. The fact that this may be deposited, lets say, on this film as a film on the surface carries no suggested use because the film is capable of many and varied uses.

THE COURT: If they made an addendum to the specification to indicate just what you have said.

9 MR. BEHRENS: That, Your Honor, they attempted, and the Patent Office, the Examiner objected to that addition of this new matter because the Patent Office takes the position that the utility of an invention must be described, that utility is part of the statutory requirement for patentability, and failure to recite within the original application prevents us from allowing that application as a patent.

THE COURT: All right, you reject the application, I suppose, for the following reasons and now --

MR. BEHRENS: That is a different question.

THE COURT: I know it is a different question and I am asking it as a different question. Suppose the possibility of supplying the utility.

MR. BEHRENS: In that case, Your Honor, if that utility was supplied we would have no quarrel. That is another point.

THE COURT: You would have granted the patent?

MR. BEHRENS: That is if there was no intervening reference.

THE COURT: It does seem to have utility, doesn't it? In other words, you say this is not patentable by virtue of the fact that it does not comply with the requirements of the statute for utility, so therefore the claim is rejected.

Now, the suggestion is made: Suppose they rectify that situation,
10 if it exists, as I indicated. You say the Examiner takes the position they have had their chance and their opportunity is gone.

The next question is: Suppose they file a new application?

MR. BEHRENS: That would throw the application on the merits. I think this particular case brings up a problem on that. As I understand it the plaintiff here has a foreign filing, as I understand it in England, perhaps in other countries, and by operation of statute that would become a reference against the claims presented in the new application if the first one were turned down on the ground of lack of adequate disclosure.

THE COURT: All right. Lets assume that to be so, and I will come back to the first question: It seems to me a rather foolish position to take to change what you have admitted is invention. I don't see how you could do that.

MR. BEHRENS: I would amend my previous statement to some extent. We have admitted novelty, and as far as the record shows there might be invention in this situation if we had this prerequisite of utility shown in the application.

This is a very critical problem in our office because, especially in the chemical field when this problem arises, and we have many
11 applicants working in the same field.

THE COURT: I have this serious question as to whether or not the Court has jurisdiction in the posture in which this matter is presented. I am not to decide by way of review de novo as to whether or not the Patent Office erred in the rejection on a method basis, but whether or not to determine administratively, as a matter of law,

whether the specification as filed conforms with the statute. That would seem to me -- well, probably we have jurisdiction, but in that particular situation it would seem to me the action of the Patent Office in that particular field is complete.

The question of the terms of the statute as a matter of administrative action would be that they would be the best judges. Then it comes back again to the suggestion made -- you will pardon me for continuing -- that they ought to be realistic about this thing. If they can conform, let them conform. Instead of saying, "Well, maybe they filed in a foreign jurisdiction, and maybe there is something about a foreign reference, but to send them back to the end of the line that, to me, seems to be silly.

MR. HUDSON: Up to now, as I understand the Patent Office, if this British inventor when he wrote the British specification for filing in Great Britain, as the file copy indicates, had said deposited in the form of a film. If he had said, for example, on a pipe, those extra

12 five words, this question would never have come up. The question whether that deposit in the form of a film is suggestive of an indication of use under the statute, the Board of Appeals in the Patent Office took the position in effect, as I read their decision, that if you deposit a film like this it would not work. That is why we are here de novo with testimony and exhibits to show it does work.

We have coated various items, not only this piece of pipe, but --

THE COURT: Now, you are getting into another issue. That is why I interrogated this gentleman as to what is specifically before me. Now, if the only thing before me is whether or not this particular specification conforms with the statute, then that is all I have to decide.

MR. HUDSON: I think that is the ultimate issue.

MR. BEHRENS: Yes, I think that is the ultimate issue.

THE COURT: If that is the issue that is fine. Give me the specification. I have the statute. I will examine it and make up my own mind, and I don't need any evidence.

MR. HUDSON: Well, I have evidence only to this extent, if Your Honor will receive it. I would like to put these exhibits in simply to show

that when we do exactly what is said in these words which I have quoted
13 from the statute, from those exhibits --

THE COURT: If you put in the exhibits you have shown that will be sufficient.

MR. HUDSON: I have several others.

THE COURT: You may put all the exhibits in to show the formation of the film.

MR. HUDSON: I simply want to show that when we do that we have a useful article.

THE COURT: If you do it on a diversity of articles that would indicate the utility.

MR. HUDSON: That is correct and these, if you will notice this was a zinc-coated pipe, and it has been treated with acid and the acid has eaten it away, but when treated with acid here it protects.

THE COURT: Plaintiff's Exhibit 1.

MR. BEHRENS: May I interpose? Are we engaged in making an opening statement here?

THE COURT: Not now because the matter is qualified. In other words, gentlemen, the way I handle these matters is this: First of all to find out what the issue is, so my mind is clarified, so there will be no misunderstanding. I assume now the issue is simply this: The claims which have been rejected comply with the terms of the statute
14 with respect to what should be contained in the specification. That is the issue. I am not concerned with inventiveness.

MR. BEHRENS: Well, then may I object to the introduction of this exhibit on the ground that it is immaterial to the issue? In this particular case what one applicant may have done in his laboratory is outside the point. We are worrying here about the question of what did he actually disclose in his application.

THE COURT: But what he discloses in his application he says is to deposit polymer in the form of a film, and the Patent Office says that does not comply with the terms of the statute with respect to what the specification shall contain and from their point of view they conclude

it fails to indicate utility. These exhibits are being offered merely for that purpose.

MR. HUDSON: Being offered merely for the purpose of showing that when deposited in the form of a film, as stated in the specification, these various exhibits are exactly that, and prepared exactly in accordance with the words of the specification.

THE COURT: It could not be deposited any place except on something in the form of a film. A film is like something we call an accident.

MR. HUDSON: Why the Patent Office says that is not useful is some-
15 thing I cannot understand.

MR. BEHRENS: We would be prepared to tell you if this was a proper place. The issue presented here is whether or not the disclosure is adequate. We have an exhibit presented which allegedly was prepared according to one of the processes, Example 1, I believe it was of the application. We don't know who prepared this.

MR. HUDSON: I have the witness here.

MR. BEHRENS: We don't know what king of apparatus was used in this material here because we are exploring this question of whether the reference to film is enough. You see, Your Honor, there are many types of film. They are self-supporting.

THE COURT: Well, now, a film -- I am only a layman, but to me, and apart from the characterization of such in the photographic art is something in its nature which is incidental and requires something else to which to adhere. It is like a smile. You can't have a smile without a face. That is true, isn't it?

MR. BEHRENS: That is right, Your Honor.

THE COURT: So therefore, if you have a film, in the ordinary understanding of film, apart from the photographic art, you must have something else which relates to something else. It must be with something else.

MR. BEHRENS: May I point out, Your Honor, that --

16 THE COURT: Isn't that correct?

MR. BEHRENS: I believe not. I would not accept that definition, Your Honor, especially since films have been described as surface

coatings on an article as well as self-supporting films, and the record in this case includes self-supporting films which are also allegedly produced by the invention herein described.

THE COURT: What is the definition of film?

MR. BEHRENS: We have a number.

THE COURT: Well, let's have the definition. Bring out the book. We will go back in English class.

MR. BEHRENS: I can get a better photostat than that.

THE COURT: Well, that is what I just sent for. I can't read this.

MR. BEHRENS: May I read it to you?

THE COURT: No, I will take it directly from the dictionary. The fact that they submit photostats now rather than the original, the Judges have their eyes gone before their time.

MR. BEHRENS: I can sympathize with Your Honor. I am wearing bifocals for the first time.

THE COURT: You are?

MR. BEHRENS: And it is difficult.

MR. HUDSON: Would Your Honor care to consider these while we are
17 waiting?

THE COURT: I will admit them over his objection.

MR. HUDSON: This Plaintiff's Exhibit 2, I might explain, this is just a piece of iron pipe, one end of which was coated and the other wasn't, placed out in the open air, and one end is badly rusted and, of course, the other one being protected, is not. That is Exhibit 2.

Exhibit 3 is a piece of copper pipe, one end coated and the other is not, and treated with acid. You can see in the middle of the uncoated part where it is eaten through with the acid, where it is gone. Where the film was on there is no damage.

MR. BEHRENS: Same objection, Your Honor.

THE COURT: I will let the exhibits in, subject to your objection which is overruled.

MR. HUDSON: Here is a piece of glass, which would be Plaintiff's Exhibit 4 -- rather, two glass tubes, one coated and one not, and they

were used under conditions where they were exposed to hydrofluoric acid, and one of them is completely eaten out, only one-half of it left, and the other is still there and still useful.

Finally, the fifth, Plaintiff's Exhibit 5, is a valve construction. In this connection we deposited the film on the inside of the valve to protect the working surface in the case of flowing through of an acid solution, or something of that sort.

18 THE COURT: Well, the first definition: Any thin slight covering, veil, layer, or haze, also mist. Oh, I beg pardon.

First, the primary definition is: A thin skin, a membranous covering and, second, any thin, slight covering, veil, layer or haze, also mist -- and then we are not concerned with the specific secondary example meaning a growth or in the eyes. Third, a slender thread, and then, Four -- we are not concerned with that, and then Five, a thin flexible transparent sheet, a cellulose nitrate or sheet with a slight covering or emulsion; that is I take it to be the photographic film.

Now, the definition of the word, as I make it out here tends to the old prism, a film, skin, polymer, so, I don't know -- well there you have it.

Is that what you have?

MR. BEHRENS: That is right, Your Honor.

THE COURT: Well, that is all there is to it, isn't it?

MR. BEHRENS: Yes, Your Honor, you notice it suggests two types of film, one self-supporting, one deposited on the outer surface and, of course, there may be variance in each type.

MR. HUDSON: We are talking only about the one that is deposited
19 on the surface.

THE COURT: Now, you are going to put the specifications, I assume, in evidence.

MR. HUDSON: It would be part of this very bulky document which is there, plus the Board's decision, and a copy of the application.

THE COURT: Now, as I understand as to what the Examiner said, did the Board of Appeals follow the Examiner specifically?

MR. HUDSON: What page are you looking at?

THE COURT: I am looking at your memorandum. I thought you said -- let's see --

MR. HUDSON: I haven't found the place you are referring to.

THE COURT: I am talking on page 2, the sole reason for the rejection of the claim is based on the decision of the Board of Appeals?

MR. HUDSON: That is the decision from the Board of Appeals, yes, sir, and that is in this exhibit here.

THE COURT: That is all there is, there isn't any more.

MR. HUDSON: As I say, the only purpose of our witnesses was to explain what the term film meant, and to show this exhibit is made in conformity with the specification, and that they did actually protect, and were functional.

20 THE COURT: The position the Patent Office takes is that it doesn't indicate utility?

MR. HUDSON: Well, yes, you will find, Your Honor, in the Board's decision, that in order for a film like this to be useful it must adhere. Well, of course, that is obvious, it must adhere, but the Board seems to have found, for some unexplained reason that the film described in this application just wouldn't stick on there. That is one of the things we wanted to prove, that it does adhere, and it does stick on there. It is a very useful thing.

THE COURT: The Board's position is that the specification as submitted does not conform to the statute.

MR. HUDSON: And that is because, they say, if you merely show it deposited as a film you can't tell what kind of film is meant. We say it means a protective film. Secondly, they say --

THE COURT: Did you say that before the Examiner and before the Board of Patent Appeals?

MR. HUDSON: Yes, and the Board then went on to this point: They said in order for the film to be a protective film it must adhere to the thing to be protected, and they seemed to doubt that a film produced in this fashion would actually adhere.

THE COURT: Was the exhibit submitted?

MR. HUDSON: They were not submitted to the Board of Appeals, no.

THE COURT: All right.

MR. HUDSON: That is the new evidence which we planned to present.

THE COURT: And you object to the evidence merely on its presentation with reference to our discussion, with reference to the nature of the film?

MR. BEHRENS: I am objecting, Your Honor, because this particular film, or the particular use, was not even suggested by the application. We are taking outside evidence, evidence of contemporary work to modify --

THE COURT: You are relying on the specification?

MR. BEHRENS: That is right, Your Honor.

THE COURT: All right.

MR. BEHRENS: And may I present --

MR. HUDSON: Have you something to offer?

MR. BEHRENS: You are not leaving, Your Honor?

THE COURT: No, I am not leaving. I will be here the rest of the day, but I may be leaving ycu in a few minutes.

MR. HUDSON: I thought Mr. Behrens had some exhibits he wanted to present.

MR. BEHRENS: I have, Your Honor.

MR. HUDSON: I take it Your Honor doesn't want to hear testimony, and I though we were through, but Mr. Behrens has something and may want to go on.

MR. BEHRENS: Your Honor, I want to present and have marked for identification and present in evidence the folder of the Patent Office, Exhibit 1, items A, B, C and D.

Item B is the Examiner's statement, and you already have that of record.

Item C is the decision of the Board of Appeals.

Item D is the decision of the Board of Appeals on reconsideration. This probably would not have been necessary in this case except to make

it easier to find. But Item A here presents additional evidence. It is the Journal of Polymer Science, Volume 6, January to June, 1951, pages 319 to 329.

THE COURT: What does that purport to show?

MR. BEHRENS: That shows a view that the inventor took of his own invention, and it has some relevance to some of their contentions before the Board of Appeals.

THE COURT: Well, now, let me get this thing straight. I want you gentlemen to have no misunderstanding as to what is in my mind:

I understand that the only question before me is simply this: There was a specification submitted. The implication, the underlying implication was that there was invention presumably, but the Patent Office made no direct findings in respect to that, and that the matter was rejected because it did not comply with the terms of the statute which specifically set up how it should be done in the specification.

MR. BEHRENS: That is right, Your Honor.

THE COURT: That is the only question before me, so what the individual may have thought of his own invention, query, what help is that?

MR. BEHRENS: We have, Your Honor, exhibits presented which shows what he thinks of the uses of his invention. This relates to one of those contemplated uses.

THE COURT: All right.

MR. BEHRENS: Do you have any objection?

MR. HUDSON: This is a 1951 publication, three years after the application was filed, and I don't know what bearing it has here.

THE COURT: I don't, either. I am going to be perfectly frank. I am going to address myself to the very simple proposition as to whether or not, and I am referring to the description with relation to cooling, and cooling may take place in contact with the cool surface on which the polymer is deposited in the form of a film, and that was rejected because the Patent Office concluded that failure to conform with the statutory requirement which provides that the specification shall contain a written description of the invention as to the manner and process of making and

using.

MR. HUDSON: That is correct.

THE COURT: In such full, clear, concise and exact terms as to enable any person skilled in the art. That is all I am going to address myself to.

MR. HUDSON: That is the only purpose of these exhibits, to show that anyone skilled in the art does exactly what is stated and comes out with a useful result.

THE COURT: Mr. Behrens, you are endeavoring to say that the defendant, if you want to call it that for the sake of this discussion, presumably concluded that the description which he submitted at the Patent Office, and the claim indicated that there was something radically wrong with it.

MR. BEHRENS: I wouldn't urge that interpretation, Your Honor.

THE COURT: What interpretation would you urge?

MR. BEHRENS: First, the inventor here merely stated that the film, or polymer, could not be molded in the usual way, referring to the infusability of the polymer here, makes it impossible to mould the polymer in the usual way. That has probably very little bearing.

THE COURT: I don't think it has.

MR. BEHRENS: As has been presented here, Your Honor, and I expect Your Honor in considering the contentions before the Board of Appeals, you will find that they were not entirely squared with the contentions made here. I mean I am not suggesting that counsel is trying to mislead or anything, but inferences here as shown by the exhibits as presented, is on the use of this material as a coating material, in other words, something which adheres on the surface of something else.

I wish to present, or complete the record, really, by putting in evidence a copy of the film that was submitted to the Board of Appeals for consideration. I propose to take from this record half of a film submitted, and if no objections are made, add it to the record in this case so that you can see, Your Honor, what has been considered below.

MR. HUDSON: I don't know anything about this physical piece of film.

THE COURT: I will take the whole record there that is presented before me, if you want to use that term, with a particular reference to that particular exhibit. Is that it?

MR. BEHRENS: Your Honor, I am not empowered to put in evidence this entire application file.

THE COURT: You may.

MR. HUDSON: I have already offered a certified copy. It is there.

26 THE COURT: The file wrapper.

MR. HUDSON: There are no pieces of film in there but the papers are there.

MR. BEHRENS: That is the point, Your Honor. I suggest --

THE COURT: If you are not empowered to put in the whole record, why do you offer --

MR. BEHRENS: I take the responsibility of splitting the film.

THE COURT: I will take the responsibility of putting the whole record in. If you are going to take the responsibility of taking part of it, why shouldn't I relieve you of the responsibility of part of the burden and take the whole responsibility of all of it?

MR. BEHRENS: As I understand it, the policy of the Patent Office has never made its official records part of the Court's procedure.

THE COURT: I know, but you are making part of the official record part of the Court proceeding, are you not? You are taking part of an exhibit out of the official record and making it a part of the Court procedure, are you not?

MR. BEHRENS: Half of the exhibit. This is the film.

THE COURT: If you can take half why don't you take it all?

27 MR. BEHRENS: May I suggest a way out of this quandary?

THE COURT: I am in no quandary. You are in a quandary.

MR. BEHRENS: I appreciate that, Your Honor. Could I direct your attention to this film? Now, let the record show that I am opening

a transparent glassine bag attached to paper No. 12, which is page 39 of Plaintiff's Exhibit 3, was it not, or 4?

MR. HUDSON: 6.

MR. BEHRENS: 6. I beg your pardon.

MR. HUDSON: Page 39. Let me check it again. The page is correct but, of course, there is no attachment in this file the Patent Office furnished us. They only gave us copies of the actual papers.

THE COURT: Were you aware of the fact that it was in the record?

MR. HUDSON: There is reference to it in the Board of Appeals decision, yes, sir, but we haven't seen them before.

MR. BEHRENS: Could I make the observation that this was not a test film and was subject to tearing?

THE COURT: No, I am not getting into that. The only thing I am getting into is whether or not it complies with the terms of the statute, whether it is tough or tender, weak or strong. I want this record to
28 indicate just exactly what I am concerned with, and that only, and I think it does. Do you agree now?

MR. BEHRENS: I agree.

MR. HUDSON: I do.

THE COURT: All right, gentlemen. That is all.

* * * * * *

DEPARTMENT OF COMMERCE

United States Patent Office No. 13,675

* * * * * * *

File Wrapper and Contents of the Application of Michael Mojzesz Szwarc, filed September 8, 1948, Serial Number 48,339, for Production of New and Useful Polymers.

[Filed Dec. 19, 1956, Harry M. Hull Clerk] [PLFS. EX. NO. 6]

* * * * * * *

[Sep 8, 1948, U.S. Patent Office] PLFS. EX. NO. 6 48339

Tr 1 This invention relates to the production of new and useful polymers. Inv. C.1

The invention consists in a process for the production of a polymer in which the vapour of an aromatic hydrocarbon consisting of from 1 to 4 benzene nuclei with two methyl groups substituted in the para positions of one benzene nucleus and formed only of condensed benzene nuclei when consisting of more than one nucleus, is pyrolysed by being subjected to a temperature between 700 and 1000° C for not more than 10 seconds and the resulting vapours are cooled to a temperature at which a solid polymer is deposited.

The invention also consists in a process for the production of a polymer in which the vapour of paraxylene is pyrolysed by being subjected to a temperature between 700 and 1000° C for not more than 10 seconds and the resulting vapours are cooled to a temperature at which a solid polymer is deposited.

The invention also consists of a process for the production of a polymer in which the vapour of 1.4 dimethyl napthalene is pyrolysed by being subjected to a temperature between 700 and 1000° C for not more than 10 seconds and the resulting vapours are cooled to a temperature at which a solid polymer is deposited.

The pyrolysis step of the process of the invention is preferably carried out by subjecting the vapour of the aromatic hydrocarbon to a temperature between 700 and 900° C for from 0.1 to 1 seconds.

Tr 2 High pressures e.g. pressures above about 3 atmospheres should be avoided in carrying out the process of the invention. Preferably the pressure exerted by the vapour which is subjected to pyrolysis is in

the region of atmospheric pressure or below. The vapour subjected to pyrolysis may be diluted with an inert carrier gas such as nitrogen or carbon dioxide in order to maintain a low partial vapour pressure of the aromatic hydrocarbon.

Experiments carried out by reacting the pyrolysed vapours of para-xylene with iodine vapour have resulted in the production of para-xylylene di-iodide ($CH_2I.C_6H_4.CH_2I$). This indicates that the radical $CH_2.C_6H_4.CH_2$ exists in the vapour phase in the pyrolysed vapours and it appears that this radical is the monomer of the polymer obtained by applying the process of the invention to para-xylene. The ratio of carbon to hydrogen in the polymer as determined by analysis confirms this view.

Similar experiments carried out with the pyrolysed vapours of 1.4 dimethyl naphthalene show that the monomer (existing in the vapour phase) of the polymer obtained in this case consists of napthalene with two CH_2 (methylene) groups substituted in the 1.4 positions.

Polymerisation takes place spontaneously on condensation of the monomer vapour by cooling. The cooling may take place in contact with a cool surface on which the polymer is deposited in the form of a film.

Tr 3 Generally stated, the ~~recurring~~ monomeric units of the polymers produced by the process of the invention thus consist of from one to four benzene nuclei with two CH_2 groups substituted in the para positions of one benzene nucleus and are formed only of condensed benzene nuclei when consisting of more than one nucleus.

It is possible that some cross-linking may occur in the polymers although the X-ray patterns of the polymers produced show no definite evidence of such cross-linking.

The invention also consists in a process for the production of a polymer by the condensation of the vapour of an aromatic hydrocarbon consisting of from one to four benzene nuclei with two CH_2 groups substituted in the para positions of one benzene nucleus and formed only of condensed benzene nuclei when consisting of more than one nucleus.

The invention also consists in a process for the production of a

polymer by the condensation of the vapour of an aromatic hydrocarbon consisting of a single benzene nucleus substituted by two CH_2 groups in the para positions.

The invention also consists in a process for the production of a polymer by the condensation of the vapour of an aromatic hydrocarbon consisting of two condensed benzene nuclei with two CH_2 groups substituted in the para positions of one nucleus.

The aromatic hydrocarbon in vapour form which is subjected to condensation to produce a polymer in accordance with any of the three preceding paragraphs, may be obtained by the pyrolysis of the vapour of
Tr 4 the corresponding dimethyl aromatic hydrocarbon resulting in the removal of a hydrogen atom from each methyl group.

The invention also consists in the polymers produced by the processes referred to above.

Insert at

The temperature to which the monomer vapour formed by pyrolysis should be cooled for condensation and polymerisation to take place can easily be determined by experiment. It depends on the partial vapour pressure of the monomer in the gas phase. The upper limit increases with increasing partial vapour pressure. Generally speaking, the operative temperature range for cooling will be between room temperature and -80°C though higher temperatures may be found effective with high partial vapour pressures of the monomer.

Condensation and subsequent polymerisation may take place in successive stages at progressively reduced temperatures, that is the vapours leaving the first condensation and polymerisation stage are further cooled to condense and polymerise a further portion of the residual monomer vapour and so on.

Following are examples of processes for the production of new polymers in accordance with the invention:

Example 1.

Para-xylene vapour at a pressure of 8 to 10 mm. Hg was passed through a tube heated to 860°C at such a rate that the vapour was subjected to this temperature for from 0.3 to 0.4 seconds. The vapours leaving the tube were passed into a trap in which they were cooled to

O°C in contact with a cold surface on which the polymerised product
Tr 5 was deposited in the form of a white occasionally transparent film.

The yield of polymer was approximately 12% by weight of the para-xylene treated. Unconverted para-xylene was also condensed in the trap.

Example 2.

Para-xylene vapour at a pressure of 150 mm Hg. was passed through a tube heated to 820°C at such a rate that the vapour was subjected to this temperature for about 0.1 seconds. The vapours leaving the tube were cooled to room temperature and the poly erised product was deposited.

The polymer was in the form of a film similar to that obtained in example 1.

Example 3.

Carbon-dioxide at atmospheric pressure was bubbled through liquid para-xylene maintained at 100°C to take up para-xylene vapour so that the partial pressure of the latter in the mixture was about 100 mm.Hg. The mixture of carbon-dioxide and vapour was then passed through a tube heated to 800°C at such a rate that it was subjected to this temperature for 1 second. The gaseous mixture leaving the tube was cooled to room temperature in a trap in which the polymer was deposited in the form of a white occasionally transparent film.

Example 4.

1.4 dimethyl naphthalene vapour at a pressure of about 10 mm.Hg. was passed through a tube heated to 860° C at such a rate that the vapour
Tr 6 was subjected to this temperature for from 0.3 to 0.4 seconds. The vapours leaving the tube were passed through a trap in which they were cooled to room temperature. The polymerised product was deposited in the trap in the form of a white film.

Ans. D1

All the polymers obtained in the above examples were useful because they had great thermal stability and did not soften when heated up to a temperature of 270°C. They were not attacked by sulphuric acid at 150°C. They were insoluble in, and also did not swell visibly in, boiling

ethyl alcohol

diethylether

chloroform
xylenes
benzene
toluene
glacial acetic acid.

Ins. E2

Tr 7 I claim:

1. A process for the production of a polymer in which the vapour of an aromatic hydrocarbon consisting of from one to four benzene nuclei with two methyl groups substituted in the para positions of one benzene nucleus and formed only of condensed benzene nuclei when consisting of more than one nucleus, is pyrolysed by being subjected to a temperature between 700 and 1000°C for not more than 10 seconds and the resulting vapours are cooled to a temperature at which a solid polymer is deposited.

2. A process for the production of a polymer in which the vapour of para-xylene is pyrolysed by being subjected to a temperature between 700 and 1000°C for not more than 10 seconds and the resulting vapours are cooled to a temperature at which a solid polymer is deposited.

3. A process for the production of a polymer in which the vapour of 1.4 dimethyl naphthalene is pyrolysed by being subjected to a temperature between 700 and 1000°C for not more than 10 seconds and the resulting vapours are cooled to a temperature at which a solid polymer is deposited.

4. A process as claimed in any of the preceding claims in which the pyrolysis is carried out with the vapour of aromatic hydrocarbon exerting a pressure in the region of atmospheric pressure or below.

5. A process as claimed in any of the preceding claims in which the pyrolysis is carried out at a temperature between 700 and 900°C.

Tr 8 6. A process as claimed in any of the preceding claims in which the vapour of the aromatic hydrocarbon is subjected to the temperature of pyrolysis for from 0.1 to 1 seconds.

7. A process as claimed in any of the preceding claims in which after pyrolysis the resulting vapours are cooled in contact with a cold

surface to a temperature at which the polymer is deposited on the said surface in the form of a film.

8. A process as claimed in any of the preceding claims in which the pyrolysis is carried out with the vapour of the aromatic hydrocarbon diluted with an inert gas.

9. A process as claimed in any of the preceding claims in which the resulting vapours are cooled to a temperature between room temperature and -80°C.

10. A process for the production of a polymer by the condensation of the vapour of an aromatic hydrocarbon consisting of from one to four benzene nuclei with two CH_2 groups substituted in the para positions of one benzene nucleus and formed only of condensed benzene nuclei when consisting of more than one nucleus.

11. A process for the production of a polymer by the condensation of the vapour of an aromatic hydrocarbon consisting of a single benzene nucleus with two CH_2 groups substituted in the para positions.

12. A process for the production of a polymer by the condensation of the vapour of an aromatic hydrocarbon consisting of two condensed benzene nuclei with two CH_2 groups substituted in the para positions of one nucleus.

Tr 9 13. A process asclaimed in any of claims 10 to 12 in which the said aromatic hydrocarbon in vapour form is produced by the pyrolysis of the vapour of the corresponding dimethyl aromatic hydrocarbon resulting in the removal of a hydrogen atom from each methyl group.

14. A polymer in which the recurring unit consists of from one to four benzene nuclei with two CH_2 groups substituted in the para positions of one benzene nucleus and is formed only of condensed benzene nuclei when consisting of more than one nucleus.

15. A polymer in which the recurring unit consists of two condensed benzene nuclei with two CH_2 groups substituted in the para positions of one nucleus.

16. A polymer in film form in which the recurring unit consists of a benzene nucleus with two CH_2 groups substituted in the para positions.

17. The polymer produced by the process claimed in any of claims 1 to 13.

add a ~~C~~ C^3

Tr 39 [Mail Division, Feb. 2, 1953]

(AMENDT D AND AFFIDAVIT (R 132))

IN THE UNITED STATES PATENT OFFICE

Division 50 - Room 7612

MICHAEL MOJESZ SZWARC

Ser. No. 48,339

Filed September 8, 1948

PRODUCTION OF NEW AND USEFUL POLYMERS

AMENDMENT AFTER FINAL REJECTION

Hon. Commissioner of Patents

Washington 25, D.C.

Sir:

In the matter of the above-identified application and in response to the Office Action dated August 18, 1952, entry of the following amendment is respectfully requested.

IN THE SPECIFICATION

Page 6, before the final paragraph, insert the following paragraph:

--The polymers produced in the above examples produced uniform continuous films which were tough and coherent and were easily stripped from the tubular trap to produce self-supporting flexible tubes of polymer. --

D1

In the final paragraph, line 1, after "examples" insert--were useful because they--.

Tr 53 [Feb. 18, 1953, Mail Division]

(AMENDMENT E)

UNITED STATES PATENT OFFICE

In Re Application

MICHAEL MOJESZ SZWARC

Serial No. 48,339 Div. 50

Filed: September 8, 1948

For: PRODUCTION OF NEW AND USEFUL POLYMERS

AMENDMENT UNDER RULE 116

To the Commissioner of Patents,

Sir:

In the matter of the above identified application and in response to the Office action dated February 12, 1953, entry of the following amendment under the provisions of Rule 116 is respectfully requested.

In the specification:

Page 1, line 2, before the period insert --, and particularly to the production of polymer films which are heat-stable and resistant to sulfuric acid and to many organic solvents--. E1

Page 4, after line 5, cancel the insertion.

Page 6, after the last line insert the following:

--Film coatings, produced as described in the above examples, possess the enumerated advantageous properties and can be used wherever protective film coatings possessing such properties are desired. --. E2

Cancel all claims standing in the case and rewrite as follows:

Tr 54 54. A process for the production of a solid polymer of high thermal stability which is resistant to sulfuric acid and insoluble in many organic solvents, which comprises heating hydrocarbon vapors consisting essentially of para-xylene at a temperature of about 860° C for a period of from about 0.3 to 0.4 second and under a pressure of from about 8 to 10 mm. of mercury, cooling the resulting vapors to a temperature at which a solid polymer is deposited which does not soften even when heated to about 270° C, and recovering the said solid polymer. E3

55. The solid polymer produced by the process of claim 54.

Tr 61 [U.S. Patent Office, 1953, Apr 1]

(AMENDMENT F)

UNITED STATES PATENT OFFICE

In Re Application

M. M. SZWARC

Serial No. 48,339 Div. 50

Filed: September 8, 1948

For: PRODUCTION OF NEW AND USEFUL POLYMERS

SUPPLEMENTAL AMENDMENT UNDER RULE 116

To the Commissioner of Patents,

Sir:

Enter

In the matter of the above identified application entry of the following supplemental amendment under the provisions of Rule 116 is respectfully requested.

In the claims:

mew

Claim 54, line 3, cancel "most" and insert --many--; same line, cancel "the process".

Tr 63 [Apr. 20, 1953, U.S. Patent Office]

UNITED STATES PATENT OFFICE

In Re Application	Before the Board of Appeals on Appeal
M. M. SZWARC	
Serial No. 48,339	Appeal No. 36713
Filed: September 8, 1948	
For: PRODUCTION OF NEW AND USEFUL POLYMERS	

APPEAL BRIEF

* * * * * * *

Tr 64 THE ISSUES

* * * * * * *

Tr 76 2. Lack of utility:

In discussing this issue applicant would like to discuss first the amendments to the specification which are alleged to be "new matter". Applicant wishes to repeat here that the sufficiency of his disclosure with respect to utility does not depend on the admissibility of the alleged "new matter". The specification has been amended for emphasis and clarification on the question of utility.

Four amendments have been made to applicant's specification in the attempt to clarify and better to explain applicant's invention. The Examiner apparently considers that each of these amendments constitutes "new matter". At first the Examiner refused to enter the amendments containing the alleged "new matter" but applicant filed a Petition to the Commissioner and the Supervisory Examiner, Mr. Stone, directed that the amendments should be entered and the petition treated as a request for reconsideration. Since the amendments are considered by the Examiner to go to the merits in spite of the fact that they do not occur in the claims, it is presumed that the question of "new matter" must be considered in this appeal.

The first amendment to be considered is to the first sentence on page 1 of the specification. This sentence has been amended to read: "This invention relates to the production of new and useful polymers, and particularly to the production of polymer films which are heat-stable and resistant to sulfuric acid and to many organic solvents."

Tr 77 The matter underlined is that which has been added. That this does not constitute "new matter" is evident from the fact that in all of applicant's specific examples films of polymers are said to be obtained, while on page 6 of the specification it is said that all of the polymers obtained in the specific examples had great thermal stability; that they were not attacked by sulfuric acid at 150° C and that they did not even swell visibly in organic solvents of which a list of 7 typical solvents is given. This amendment therefore in effect merely expands the statement of invention on page 1 of the invention to include the formation of films (shown to be produced in the specific examples) and sets out the physical and chemical properties of these films, as disclosed on page 6 of the

specification. It combines the disclosures of the specific examples and the final paragraph of the specification and includes this in the statement of invention.

The second insert to which the Examiner objects is to page 6, after the first paragraph, and reads --The polymers produced in the above examples produced uniform continuous films which were tough and coherent and were easily stripped from the tubular trap to produce self-supporting flexible tubes of polymer. --.

That this insert is factual is clearly proved by the affidavit of applicant, filed Feb. 2, 1953. The final paragraph of that affidavit reads:

> "In the experiments which form the basis of the examples disclosed, the film produced was a tough coherent film which was easily stripped from the tubular trap and produced a self-supporting flexible tube of polymer."

The amendment to which the Examiner objects uses almost the same language. In addition, an actual sample of a tube of polymer produced in the process of one of the specific examples was filed attached to the
Tr 78 amendment, filed Feb. 2, 1953. The affidavit proves that applicant's specific examples inherently produce tubes of polymer having the properties set out in the insert. It is also to be noted that the properties described are properties which would be readily apparent to anyone who repeated the experiments specifically described in applicant's examples.

It is, of course, well established that it is permissible for an applicant who has invented a new chemical product to insert in his application a description of the chemical and physical properties of the new product which were inherent in the product as originally produced. This is so well established in fact that it is now embodied in Article 608.04 (a) of the Manual of Patent Examining Procedure. The latter provides that, "Characteristics inherent in the disclosure such as chemical or physical properties, or mode of operation, may be amplified if such inherency was initially present in the case as filed." How then can the proposed insert be held to constitute "new matter"?

The third insert objected to is on page 6, after line 7, and consists of the four words -- were useful because they --. It will be noted that,

in the very first sentence of applicant's specification, utility is alleged in the statement, "This invention relates to the production of new and useful polymers." It therefore cannot be urged that the word "useful" in the insert constitutes "new matter". Nor can it reasonably be held that the insert as a whole constitutes "new matter".

The fourth insert objected to by the Examiner is to page 6, after
Tr 79 the last line, and this reads -- Film coatings, produced as described in the above examples, possess the enumerated advantageous properties and can be used wherever protective film coatings possessing such properties are desired. --.

Here again is a factual statement which is clearly implied if not actually stated in the original disclosure. In each of the specific examples films are said to be produced. In the second paragraph on page 6 the polymers are said to have great thermal stability, not softening up to 270° C; it is said that the polymers are not attacked by sulfuric acid at 150° C and that they are insoluble in and do not swell visibly in boiling organic solvents of which a specific list is given. In the very recent case of In re Bowden et al, 86 USPQ 420, 423, the Court of Customs & Patent Appeals held:

> "Moreover, since chemical reactions frequently are unpredictable, a specification may be amended at the proper time to supply corrected data subsequently discovered."

At an interview with the Examiner the latter pointed out that the application does not state that the films produced were impermeable and that for this reason the film coatings produced in the specific examples could not be said to be capable of protecting articles from acids or organic solvents. But it is obvious, of course, that any film which will not soften when heated up to 270° C is capable of protecting articles from heat even though it were permeable. It is therefore submitted that the expression "protective film" used in the above insert cannot be considered "new matter". As a matter of fact, it is known that cellophane is per-
Tr 80 meable unless specially coated to produce water-proofness. For the packaging of vegetables and some other articles the permeability of

cellophane is an advantage rather than a disadvantage. Yet surely a sheet of permeable cellophane properly could be called a "protective" film. "Protective" is, of course, a relative term.

Attention should be called to the fact that a patent specification is addressed to those skilled in the art and it is submitted that anyone so skilled would be clearly taught by applicant's original disclosure, as well as by his amended disclosure, that he could produce films of applicant's polymer merely by contacting the pyrolyzed vapors of para-xylene with a cold surface and that these films would be heat resistant, acid resistant and solvent resistant. The inserts objected to by the Examiner are therefore merely an amplification of what is inherent in and taught by applicant's original disclosure.

With respect to the Examiner's holding of lack of utility, it might be pointed out that the inventor in this case, who is a skilled chemist, is thoroughly astonished that any question has been raised concerning the utility of his new polymers. To him it is obvious that, owing to the relatively cheap source of his raw materials and the simplicity of his process, his polymers can probably be produced at a cost far below that of many of the synthetic resins which are now being sold in huge volume. It is also obvious to him (as it would be to anyone skilled in this art) that the physical and chemical properties of his polymers, which are set out in the specification, are superior to those of many if not most of the present commercial synthetic resins. He has already interested a large United States firm in his invention and this firm is starting to develop it.
Tr 81 How then, he inquiries, is it possible to question the utility of his polymers?

Applicant has evidently made a highly important contribution to the art by discovering new polymers whose excellent properties make it likely that these polymers will soon supersede many of the polymers which are now sold in large quantities in this country. Inventions of this type have come to be recognized as among the highest achievements of the chemical art. It is submitted that it would be highly unfortunate, as well as unfair if applicant should be denied the patent protection, which

he so richly deserves, by too close adherence to technical rules. As the Circuit Court of Appeals held in the recent case of Lever Bros. Co. v. Proctor & Gamble Mfg. Co., 60 USPQ 76, 82, Judge Dobie, speaking for the Circuit Court of Appeals, Fourth Circuit, stated:

> "We cannot forget, though, that the purpose of the patent statutes is also to stimulate invention and that inventors should not be deprived of the fruits of their labors by too technical a nicety in the requirement that inventions must be adequately described to indicate their real scope and their true content."

The Board of Appeals, in Ex Parte Appeal No. 48,813 (Case No. 177) 27 J.P.O.S. 721, held, "Liberal rule applies to new chemical products."

The rejection on lack of utility is based primarily on the decision of In re Bremner et al, 86 USPQ 74. It is believed that a careful study of this decision reveals important differences between this case and that which confronted the Court of Customs and Patent Appeals in the Bremner case, and justifies a decision in favor of the applicant.

There is a superficial similarity between the two cases in that both are dealing with novel polymers and in that neither contains a flat state-
Tr 82 ment beginning with "The polymers of this invention are useful as . . .". But beyond that there is no resemblance. It should be noted, of course, that the court did not hold that a flat statement of this kind was necessary. There are several vital distinctions between the two cases.

Most important, the polymers recovered in the specific examples of Bremner et al were unformed, i.e. they were recovered as shapeless masses whereas, in contrast, applicant's specific examples demonstrate how applicant's polymer can be recovered in the form of a film coating on a cold surface exposed to the pyrolyzed vapors. In other words applicant went a step beyond Bremner et al by not only producing a new polymer but also by showing how a film coating of the polymer can be produced on a base. It is difficult to conceive of any solid film coating on a base which would completely lack utility. Applicant's affidavit, filed Feb. 2, 1953, proves that the films formed in his specific examples were coherent and tough and could be easily stripped from the surface on which they were deposited to produce a self-supporting flexible tube of polymer. Even a layman could name a dozen obvious uses to which a tough flexible tube of material could be put.

The Bremner specification began with the statement that it related to polymers of dihydropyran. It went on from there, without even an assertion of utility, to describe the conditions of polymerization and included examples wherein it was stated that various polymers were formed ranging from a viscous liquid to solids of specified melting points. No other characteristics were given and, apparently, the polymers were unformed, i.e. recovered as shapeless masses.

The C.C.P.A. held that there must be in an application:

Tr 83 1. an assertion of utility.

2. an indication of the use or uses intended. (emphasis added)

Insofar as assertion is concerned, it is obvious that applicant satisfied this since the very first sentence in his original specification asserts the production of new and useful polymers.

Insofar as an indication of utility is concerned, it is believed that applicant also satisfied this requirement since he has described distinctive properties of his polymer which readily suggest uses to those skilled in the art.

It should be noted immediately that the court did not hold it essential for a specification to state a specific end use or uses but merely that the application contain an "indication of the use or uses intended". That the word "indication" was employed advisedly is evident from the fact that in the next to last paragraph of the decision this word is repeated in the statement "There is nothing in the application which asserts utility nor anything indicating what use of the product can be made." (Emphasis added). This statement obviously could not be made concerning applicant's disclosure.

The final paragraph of applicant's original specification gives in effect four different useful properties of applicant's polymers. It states that the polymers "had great thermal stability" which means that they did not decompose on heating nor change in their properties. It also states that the polymers "did not soften when heated up to a temperature of 270° C". It should be noted that a polymer which does not even soften at 270° C would probably not melt below 300° C or thereabouts. These

two physical properties therefore show that applicant's polymer is highly resistant to heating. Many uses for films of such a polymer would be
Tr 84 immediately indicated to anyone skilled in the art from these two properties alone. Heat resistant coatings are widely used in the art.

But even more important useful properties are also set out. One is that the polymers were not attacked by sulfuric acid at 150° C. A coating of this character obviously could be used as acid proof lining for tanks containing sulfuric acid. It is also said that the polymers did not swell visibly in boiling benzene, toluene and xylenes. Ordinary rubber would swell in these solvents even when cold. Of course, there are many specific uses in the art for coatings which are resistant to hydrocarbons. Tank linings for dry cleaning operations, gasoline storage tanks, "rubber" aprons etc. come to mind. The hoses used for delivering gasoline at filling stations are made of a hydrocarbon-resistant synthetic rubber.

It would seem that anyone - even a layman - would find in applicant's specification several indications of uses to which applicant's polymer could be put. This shows clearly that the decision of In re Bremner et al is not in point. But a patent specification is addressed to those skilled in the art. This is specifically provided in Title 35, United States Code, section 112. It is respectfully submitted that applicant herein has invented a "new and useful process" and a "manufacture" and has supplied in his specification "a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same", and that he had "set forth the best mode contemplated . . . of carrying out his invention". That is all that the statute requires of him.
Tr 85 Applicant maintains the position that a description of distinctive properties of a product which is sufficient to suggest uses to those skilled in the art is sufficient to satisfy the requirements of the patent statutes as well as those set out in In re Bremner et al of "an indication of the use or uses intended". The statement of a distinctive useful property

is certainly an indication of a use. It is thus believed that the Bremner case actually supports applicant's position herein.

Regarding the extent of disclosure of utility, the court in the Bremner case found it unnecessary to go into the question in detail since it found nothing in Bremner's specification to weigh for sufficiency. The court stated that "no hard and fast" ruling could be made fixing the extent of the disclosure of utility necessary in an application. However, an indication of the court's thinking in this matter may be derived from a study of the cases cited by the court in support of its position.

The first case cited by the Court of Customs and Patent Appeals, as authority for its decision in the Bremner case, is Potter v. Tone, 1911 C.D. 295. A study of this case indicates that a description of the properties or characteristics of a novel material is sufficient to establish utility.

The Potter v. Tone case arose in an interference where it had been proved that Tone had actually prepared a new chemical compound and where it was necessary for him to prove prior actual reduction to practice, including establishment of utility. It is well recognized, of course, that the standards required for proof of utility in an interference, to establish an actual reduction to practice, are, if anything, stricter than the stand-
Tr 86 ards respecting the disclosure of utility required in a patent application. In citing Potter v. Tone the court recognized a relationship between these standards since Potter v. Tone did not involve any question as to the sufficiency of the disclosure of utility in Tone's patent application.

Tone was held to have established utility and hence reduction to practice by proving that several expert chemists and metallurgists had studied his composition and reported its properties. They reported that his novel product, silicon monoxide, was a brown vitreous solid which was a known conductor of electricity and acted as a reducing agent in many chemical reactions. The court held that this description of properties was sufficient to establish its utility, specifically stating that:

"To hold that it must be shown to be capable of use in some commercial process and that process must have been successfully practiced would seem to amount to holding that the inventor must make a second invention which might be the subject of another patent, and reduce that to practice before he could claim a reduction to practice of the original invention. The issues in this interference do not cover the use of the material in question for any specific purpose but the production of a novel material of described characteristics which characteristics may suggest many uses to subsequent inventors." (Emphasis added).

It is believed that, if the Bremner specification had met the standards set up in the case of Potter v. Tone, the court would have found in his favor. It is believed that applicant's specification describes characteristics which may suggest many uses to subsequent inventors and, therefore, falls within the standards set up in Potter v. Tone.

Tr 87 Another leading case which supports applicant's viewpoint is Corona Cord Tire Company v. Dovan Chemical Corp., 276 U.S. 358, 383. In this case the U.S. Supreme Court held that one Katz had reduced to practice an invention involving the use of a D.P.G. as an accelerator in rubber vulcanization. Katz had mixed up a batch of rubber containing D.P.G. and had vulcanized it, thus actually producing a new chemical product. But the only test he used to determine the utility of this product was the so-called "thumb and tooth test", involving biting the vulcanized rubber and testing its resiliency with the thumb. In effect Katz merely determined one useful property of his vulcanized rubber, namely its resiliency. He tested no end use, such as a road test of tires composed of his rubber. Yet the Court held, "If he had been applying for a patent for the discovery, he clearly could have maintained proof of a reduction to practice." In the present case applicant has similarly produced a new chemical product in useful form and he has established no less than 4 useful properties of this product.

Another case which shows that it is not necessary to establish a successful end use of a new product is Hoza v. Colby, 37 USPQ 782, 786.

In this case counts 1 and 2 covered a metal sheet provided with novel pertussions, while claims 3 and 4 covered an electrode for electronic tubes formed from such a sheet of metal. Hoza proved the prior production of the novel metal sheet; also that several electronic tubes had been made with electrodes made from the novel metal. But the tests on these electronic tubes proved to be unsuccessful and Hoza later abandoned use of the pertussed metal in favor of sheet metal electrodes having ordinary perforations. The Board of Appeals held that Hoza had established actual
Tr 88 reduction to practice of neither the sheet metal per se nor of the electrode owing to the unsuccessful tests on the latter. But the Court of Customs & Patent Appeals reversed the Board with respect to the first two counts, holding:

> "It must be remembered that counts 1 and 2 are drawn broadly to a pertussed metal sheet which admittedly has several uses and that reduction to practice of the invention of the metal sheets does not require a successful production of a radio tube from the metal. The mere fact that Hoza did not utilize pertussed metal for any other purpose than the making of a radio tube would be no justification for holding that if he was the inventor of the metal he had abandoned the invention involved in the same."

In other words the Court held that Hoza had established actual reduction to practice of his novel pertussed sheet even though he had failed in his tests to find a satisfactory end use for his sheet.

It is, of course, well recognized that there is a rather large class of articles whose construction is so simple and whose utility is so obvious that no specific testing is required to demonstrate utility in establishment of actual reduction to practice. Mason v. Hepburn, 13 App. D.C. 86; 1898 C.D. 510. In the present case the invention involves the production of a solid polymer and this polymer, in applicant's specific examples, was produced in the form of a film deposited on a base. It is submitted that the construction of this film was so simple and that its utility was so obvious - at least after it had been tested and found to be heat resistent, acid resistant and resistant to organic solvents - that no further testing was required to establish utility.

The Examiner's interpretation of In re Bremner et al is obviously
Tr 89 untenable. The Examiner interprets this decision as holding that an inventor of a novel product must not only disclose a process of producing the new product but also must state a satisfactory end or ultimate use for the product. The Examiner, in effect, takes the position that a specification must not only describe how a flexible, tough tube of plastic can be made but also that it must state that this tube can be used as a hose to conduct water, for example. In contrast, In re Bremner et al merely holds that the inventor's specification must give an indication of the use or uses intended. And what better way could there be of indicating uses of a novel film on a base than by stating that it has great thermal stability, that it has a softening point above 270° C, that it is resistant to sulfuric acid at 150° C and that it does not swell visibly in a list of hydrocarbon solvents?

If the decision of In re Bremner et al can be interpreted as holding that a disclosure in a patent application, of a product which is inherently useful plus a disclosure of several distinctive and useful properties of this product, is inadequate to support a patent in the absence of a statement of a specific ultimate use of the product, it is believed that this decision is not based on sound legal precedents. Applicant believes that the disclosure of a distinctive useful property is equivalent to a statement of a specific utility. The question, as to whether or not a product is useful, is believed to be a question of fact, not a question of law. If a product is inherently useful, the fact of its utility is not altered by the presence or absence of a statement of an ultimate use for the product in a patent specification.

In re Bremner et al evidently does not set forth any new standards
Tr 90 with respect to disclosure of utility but is consistent with the decisions of Corona Cord Tire Co., Hoza v. Colby and Mason v. Hepburn, discussed above. Under these decisions, it is submitted, applicant has made a satisfactory disclosure of utility in his specification and is entitled to patent protection for his valuable improvement in the art.

* * * * * * * * *

It has been pointed out that in applicant's specific examples an operative method is described of producing a polymeric film coating on a base and that the specification discloses that this film - or at least that the polymers of which the film was composed - had a high heat stability, not softening up to 270° C., and was resistant to acids and to a specified list of organic solvents. After establishment of these properties, it is submitted that the polymeric film coating was so obviously useful per se that no further testing was required to establish an ultimate use for the polymer. It has been shown that a decision to this effect would be consistent with the decision of In re Bremner et al as well as with leading decisions prior thereto.

It is therefore submitted that the Examiner erred in rejecting applicant's claims as based on a specification which is defective in its disclosure of utility, as well as in rejecting applicant's claims on prior art which has been shown to be irrelevant. Reversal of the Examiner is therefore respectfully requested.

An Oral Hearing is respectfully requested.

Respectfully submitted,
M. M. Szwarc
By /s/ Henry C. Parker
Attorney.

Tr 91 [Mailed Jul 2, 1953 Pat Div 50] Paper No. 21

DEPARTMENT OF COMMERCE

United States Patent Office

Washington

In re application of	Appeal No. 36,713
Michael Mojzesz Szwarc	Before the Board of
Ser. No. 48,339	Appeals
Filed Sept. 8, 1948	
For Production of New and Useful Polymers	

Richardson, David and Nordon, Ernest
Cheslow & Henry C. Parker for Appellant

EXAMINER'S STATEMENT

This is an appeal from the final rejection of claims 42 to 53. With the filing of the appeal applicant also filed an amendment (Paper #15) cancelling all the claims and presenting two new claims. This amendment has been entered. The claims now under appeal are 54 and 55. On April 1, 1953 applicant filed an additional amendment (Paper No. 19) which is being entered for the purposes of appeal.

A correct copy of the appealed claims appears on page 1 of the applicant's brief.

A description of the invention is adequately set out on pages 1 and 2 of the applicant's brief.

In view of the filing of the amendments of Feb. 18, 1953 and April 1, 1953 (Paper No. 15 and 19, respectively) the rejection of the claims now in the case on the cited art is withdrawn. Since there is now no rejection made on the art, a citation and discussion of the references

Tr 92 in the case is deemed unnecessary.

The only issue now remaining in the case is the question of lack of utility. Claims 54 and 55 stand rejected on the ground of lack of utility. The specification as filed does not specify any utility for the polymer obtained by the process disclosed. It is elementary that an invention to be patentable must be useful and a statement of its utility

must appear in the specification as filed. In re Bremner 86 U.S.P.Q. 74. It appears that the applicant agrees with Examiner that the specification as filed fails to provide the showing of utility as required by the statutes in view of the fact that he has filed several amendments, replete with new matter in an attempt to establish the utility of the polymer.

Applicant has filed two amendments (Papers #12 and 15) which have been entered by direction of the Supervisory Examiner, but which are objected to as being drawn to new matter.

The insert to page 1, line 2 of the specification (amendment of Feb. 18, 1953) expands the statement of invention by stating that the invention relates "particularly to the production of polymer films . . . .". It is to be noted that the application as filed mentioned the formation of films only incidently. There is no description in the specification of the films which were formed nor is there any relationship disclosed in the specification as filed between the polymer per se and the films formed from the polymer with respect to thermal stability and solvent resistance. To now state that the invention is particularly drawn to the production of
Tr 93 polymer films is clearly new matter, and it is not seen that the recitation is merely one of inherent properties.

The insert to page 6, after the first paragraph (amendment of Feb. 2, 1953) states "The polymers produced in the above examples produced uniform continuous films which were tough and coherent and were easily stripped from the tubular trap to produce self-supporting flexible tubes of polymer". In support of such statement, applicant has filed an affidavit under Rule 132 (Paper #12) which purports that the examples of the specification produce such flexible continuous films. There was also filed at the same time a sample of such flexible tube. It is to be noted that the examples of the specification show deposition of the film at room temperature and $0^{\circ}C$. There is nothing in the affidavit to indicate at which temperature the film of the affidavit was deposited nor is there any teaching in the specification that the films deposited at all temperatures are continuous self-supporting films. It is clear

from the above that there is no indication that the processes disclosed will inherently produce the films as set out in the invention.

Further, the insertion states that the films produced are uniform and tough-Casual observation of the sample submitted readily shows that the film produced is far from being uniform and manipulation of the film shows that rather than being tough it is readily disrupted. Here again it is clear that the properties attributed to the film are not inherent. It should be noted that the specification as filed does not describe the film as continuous, or self-supporting, or flexible, or coherent, or
Tr 94 uniform, or tough or tubular. As to all these characteristics, the specification is silent. The films in the specification are merely described as white sometimes transparent films.

The insertion to page 6, last line appears in the amendment of Feb. 2, 1953. This insertion "were useful because they" is an attempt to place in the case a statement of use based on the properties set out in the specification. The mere fact that the polymer has certain physical properties does not necessarily mean that the polymer is useful. In re Michalek 1947 C.D. 458 at page 460 it is stated "the polymer and co-polymers of many polymerizable materials are in liquid, semi-solid and solid forms of widely divergent properties, many of which are wholly without utility."

The amendment to page 6, after the last line appears in the amendment of Feb. 18, 1953. This amendment refers to film coatings produced by the example and states that they can be used wherever film coatings having such properties are desired. It is first pointed out that the application as filed made no reference to film coatings as such. Further, there is nothing in the specification to indicate that the polymers are useful as protective film coatings nor how such film coatings are to be prepared. Moreover, it has not been established that the examples of the specification will inherently produce film coatings.

It has long been established that a showing of utility must be present in the case as filed and that applicant cannot rely on the insertion of new matter to over come the rejection on lack of utility.

Tr 95 Applicant argues vigorously that even a layman looking at the physical properties of the polymer formed would find indications of its use. However, it is pointed out that there is nothing in the specification to teach how the polymer having those physical properties may be put to use. The attention of the Board of Appeals is directed to the fact that applicant is preparing an entirely new polymer, different from all other polymers, and one could not tell how to use this polymer by looking at other polymers which are not related to the instant polymer.

Summary

Claims 54 and 55 stand rejected on the ground of lack of utility for the reason that the specification as filed recites no use for the polymer.

The insertions to the specification made in the amendments of Feb. 2, 1953 and Feb. 18, 1953 are drawn to new matter and are therefore deemed incompetent to overcome the rejection of lack of utility.

Respectfully submitted,

/s/ W. Bengel
Examiner, Div. 50

Henry C. Parker
National Press Bldg.
Washington 4, D. C.

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Tr 103 [Mailed Jan 29, 1954, U.S. Patent Office, Board of Appeals] Paper No. 24

Appeal No. 367-13

Hearing: January 11, 1954

IN THE UNITED STATES PATENT OFFICE

BEFORE THE BOARD OF APPEALS

Ex parte Michael Mojzesz Szwarc

- - -

Application for Patent filed September 8, 1948, Serial No. 48,339. Production of New and Useful Polymers.

Richardson & David and Richardson, David & Nordon, Ernest Cheslow & Henry C. Parker for appellant.

This is an appeal from the action of the Examiner refusing to allow claims 54 and 55, which are all of the claims now pending in the case, and which replace claims finally rejected.

The appealed claims read as follows:

54. A process for the production of a solid polymer of high thermal stability which is resistant to sulfuric acid and insoluble in many organic solvents, which comprises heating hydrocarbon vapors consisting essentially of para-xylene at a temperature of about 860°C. for a period of from about 0.3 to 0.4 second and under a pressure of from about 8 to 10 mm. of mercury, cooling
Tr 104 the resulting vapors to a temperature at which a solid polymer is deposited which does not soften even when heated to about 270° C, and recovering the said solid polymer.

55. The solid polymer produced by the process of claim 54.

The subject matter of the appealed claims is sufficiently described in the claims themselves. The sole reason for rejection of the claims is based on the Examiner's holding that the original description of this case does not comply with the requirements of the statutes with respect to a

statement of utility of the claimed subject matter. The significant portion of the statute is the first paragraph of Section 112 of the Patent Act of 1952. This paragraph does not differ materially from the significant portion of the prior statute. The paragraph reads as follows:

> "The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention." (emphasis added).

Appellant insists that the original description is sufficient to comply with the statute, asserting that any one skilled in the art would be immediately aware of the utility of the polymer product resulting from the disclosed process.

Appellant has added certain amendments to the specification, relating to the question of utility, and the Examiner has held that such amendments are new matter and therefore not available to provide a compliance with the statute. Appellant insists that the additions are not new matter and
Tr 105 that he does not rely on such additions to escape the charge of insufficiency of disclosure. Appellant's Brief contains the following statement:

> "Applicant wishes to repeat here that the sufficiency of his disclosure with respect to utility does not depend on the admissibility of the alleged 'new matter'. The specification has been amended for emphasis and clarification on the question of utility."

We will consider the description as originally filed and we will also consider the significance of the subject matter added by way of amendment. Appellant first calls attention to the first sentence of the specification which refers to "useful polymers." The mere assertion that the subject matter is useful, like an assertion that such subject matter is novel and inventive is not controlling and does not satisfy the requirements of the statute. At this point there has been added a

statement referring to the production of "polymer films" which possess certain qualities. The reference to films is derived from statements in each of the examples. Example 1 includes a statement that the "polymerized product was deposited in the form of a white occasionally transparent film." This deposition takes place on the interior walls of the trap which apparently operates as a condenser-receiver and is maintained at a temperature of $0^{\circ}C$. and the film formation takes place by deposition from a vapor heated to a temperature of $860^{\circ}C$. The noun "film" is defined in the Standard dictionary as:

> "film, n. a slight viscous, watery, or opaque coating or layer; a thin membrane; a pellicle; as a film of oil. 2. Phot. (1) A thin
Tr 106 coating of sensitized material spread upon some support for receiving a picture by the agency or any one of many processes; also, the same coating including the picture after its production. (2) a flexible support, as a celluloid, to receive a sensitized coating for making pictures; also, the support bearing the complete picture. (3) Hence, a narrow strip of such sensitizing material for the photographing and reproduction of a series of pictures as in the motion-picture; colloquially, the motion-picture itself; 3. A delicate filament, as a cobweb."

The apparent conclusion to be drawn from the words used in the examples is that the product is deposited on the interior surfaces of the walls of the receptacle used as a receiver for the condenser and we do not believe that such words are to be interpreted as suggesting the formation of a self-sustaining film. The suggestion to the latter effect, embodied in the amendment, page 1 line 2 of the specification, appears to us to be new matter. The statement that a polymeric material is deposited in the form of a film or layer on the interior surfaces of a receptacle does not imply the formation of a useful self-supporting film. The insertion at page 6 below line 6 to the effect that the polymers produced in accordance with the examples form continuous films which may be stripped from the trap to produce self-supporting flexible tubes is likewise not supported by the statements concerning the formation of a film in the original

specification. The reference to the use of a tubular trap in the amendment under discussion is likewise not supported by the original description. Specimens purporting to illustrate such self-supporting flexible tubes of the polymer have been presented in the record and supported by an affidavit executed by appellant. The affidavit states in substance that
Tr 107 the films thus submitted were produced in actual experiments of the type disclosed in the specification. The specimens thus submitted can hardly be characterized as tough, coherent or self-supporting and flexible since the specimens are so fragile that one was broken when removed from the envelope for inspection.

A third insertion has been presented at the end of the specification referring to the preparation of protective film coatings. It is asserted in the brief that such coatings possess obvious utility by reason of their resistance to attack by sulphuric acid and by familiar organic solvents and their thermal stability. The suggestion that the same experiment, that is the formation of a deposit on the interior of a receptacle is illustrative of the formation of self-sustaining films and also the formation of protective coatings is in our opinion self-contradictory. An essential characteristic of a protective coating is adequate adherence to the base on which it is applied. In forming a self-sustaining film it is essential that adherence to the base be avoided. While we are well aware that protective coatings and self-supporting films have been prepared from compositions containing the same film forming material (such as for example nitro-cellulose) special compounding and special methods of application must be employed to obtain these two divergent results. Compositions useful to form protective coatings are ordinarily applied in the form of mobile liquid compositions which thereafter become solidified either by removal of solvent or chemical changes in the coating
Tr 108 materials. In the present instance it would appear impossible to employ the polymer as a coating material since it appears to be insoluble in familiar solvents and possess such a great degree of thermal stability as to be apparently infusible.

We have carefully reviewed the specification in the light of the

contentions and explanations advanced on appellant's behalf but are of the opinion that the description does not provide an adequate compliance with the requirements of 35 U.S. Code, Sec. 112. We are also of the opinion that the insertions presented for entry into the specification are not derivable from the description as originally filed and therefore embody new matter. The affidavit presented in support of some of this subject matter cannot be used for that purpose. Toupet-Taylor Engr. Co. v. Red Dog Mfg. & Supply Co., 1928 C.D. 220. The question is not whether appellant actually completed an invention prior to filing this case but whether the description of this case provides a proper compliance with 35 U.S. Code, Sec. 112. The Examiner has cited and relies on In re Bremner et al 638 O.G. 6; 37 C.C.P.A. 1032; 1950 C.D. 342; 182 F (2d) 216; 86 USPQ 74.

Appellant directs attention to the statement of the Court to the effect that "the law requires that there be in the application an assertion of utility and an indication of the use or uses intended." Appellant suggests that the statement of the introductory sentence of the description referring to "useful polymers" is an assertion of the utility and that the statement concerning the deposition of the polymer in the form of a film
Tr 109 on the interior surfaces of the trap is a sufficient indication of utility. We do not believe the Court's language is to be construed as indicating that a bare "assertion" of utility and an "indication" such as the deposition of a film constitutes a proper compliance with the requirements of the statute. We believe that the statement that a hard resin was produced by Bremner et al constitutes as much of an "indication" of utility as does the reference to the deposition of a film in the present description.

Appellant has cited and discussed a number of decisions which are obviously based on distinct facts. We believe that the words of the statutes are controlling in the present instance.

The decision of the Examiner is affirmed.

/s/ E. W. Geniesse)
Examiner-in-Chief)
/s/ (Illegible)) Board
Examiner-in-Chief) of
/s/ M.W. Tucker) Appeals
Examiner-in-Chief)
(Acting))

January 29, 1954

Henry C. Parker
National Press Bldg
Washington 4, D.C.

Tr 127 [Mailed Mar 18, 1954, U.S. Patent Office, Board of Appeals] Paper No. 26

IN THE UNITED STATES PATENT OFFICE

BEFORE THE BOARD OF APPEALS

Ex parte Michael Mojzesz Szwarc

- -

Application for Patent filed September 8, 1948. Serial No. 48,339. Production of New and Useful Polymers.

Richardson, David and Nordon, Ernest Cheslow & Henry C. Parker for appellant.

ON PETITION FOR RECONSIDERATION

Petitioner requests reconsideration of our decision of January 29, 1954 wherein we affirmed that of the Examiner in rejecting all of the claims pending in the case.

Petitioner presents a somewhat more extended argument relating to the same question of whether or not the present specification contains

a written description which satisfies the requirement of the statute particularly as interpreted by the Court of Customs and Patent Appeals in the In re Bremner et al case cited by us. Petitioner does not present any arguments distinctly different from those heretofore presented and
Tr 128 considered by us. We have completely stated our position in the decision and no useful purpose would be served in reiterating the substance of that decision.

The petition has been considered but is denied with respect to making any change in our decision.

/s/ E. W. Geniesse
Examiner-in-Chief
/s/ (Illegible)
Examiner-in-Chief
/s/ M.W. Tucker
Examiner-in-Chief
(Acting)

Board of Appeals

March 18, 1954

Henry C. Parker
National Press Bldg
Washington 4, D. C.

[Filed June 21, 1956]

37 UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

PETROCARBON LIMITED,
Plaintiff

v.

ROBERT C. WATSON,
Commissioner of Patents,
Defendants

Civil Action No. 1602-54

MEMORANDUM

This is an action against the Commissioner of Patents under Section 145 of Title 35, U.S.C. Unlike the usual case under this section, however, there is no issue of patentability. The sole issue is whether the specification meets the requirements of Section 112 of Title 35 for a written description of the manner of using the invention.

The Board of Appeals relied upon the case of In Re Brenner, Taylor and Jones, 182 F. 2d 216, to support its holding. There, the Court stated:

> It is our view that no 'hard and fast' ruling properly may be made fixing the extent of the disclosure of utility necessary in an application, but we feel certain that the law requires that there be in the application an assertion of utility and an indication of the use or uses intended. [sic]

The question, it would appear, is a close one. However, as was said in Abbot v. Coe, 71 App. D.C. 195, 197 " ' While the judgment of Patent Office officials is not absolutely binding on the Courts, it is entitled to great weight, and is to be overcome by clear proof of mistake.' "1/

Finding, therefore, no "clear proof of mistake," the Court concludes the ruling of the Patent Office should remain, as a consequence, undisturbed.

Order accordingly.

/s/ Matthew F. McGuire
United States District Judge

June 21, 1956

1/ See also Mississippi Valley Barge Line Co. v. United States, 292 US 282, 286, 287.

[Filed August 23, 1956]

38 MOTION TO REOPEN CASE AND TO TAKE ADDITIONAL TESTIMONY

Plaintiff moves the Court to reopen this case and to receive testimony which was offered at the hearing on April 17, 1956, but which the Court declined to receive.

The grounds of this motion are as follows:

(1) The offered testimony would have shown that the decision of the Board of Appeals of the U. S. Patent Office was based in material part on mistakes of fact.

(2) The offered testimony would have shown that the written description of the invention in the specification of the patent application in suit is adequate to enable a person skilled in the art to which it pertains to make and use the invention.

(3) The Court erred in declining to receive the offered testimony on the ground that it was not necessary to the decision of the issues of this case.

(4) The Court erred in declining to receive testimony for the purpose of showing that the language of the specification does in fact instruct a person skilled in this art how to make and use the invention.

/s/ Ralph H. Hudson
Attorney for Plaintiff

* * *

[Filed September 15, 1956]

39 FINDINGS OF FACT

1. Petrocarbon Limited, a foreign corporation, organized and existing under and by virute of the laws of England, the assignee of Michael Mojzesz Szwarc, brought this action under 35 U.S.C. 145, to

authorize the Commissioner of Patents to issue letters patent to it containing claims 54 and 55 of Michael Mojzesz Szwarc's application for patent entitled "Production of New and Useful Polymers," Serial No. 48,339, filed September 8, 1948.

2. The Szwarc application, here in suit, relates to a process of producing a polymer and the resulting polymer. In the process para-xylene vapors are heated at a temperature of about 860° Centigrade for a period of from about 0.3 to 0.4 seconds and under a pressure from about 8 to 10 mm. of mercury, and the vapors then cooled to a temperature at which a solid polymer is deposited.

3. The Szwarc application as filed described the deposited product as being "in the form of a white occasionally transparent film" (Examples 1 and 3), "in the form of a film similar to that obtained in Example 1"
40 (Example 2), or "in the form of a white film" (Example 4). The polymer products of the examples were further described in the application as filed as having great thermal stability, as not softening when heated up to a temperature of 270° C., as not being attacked by sulfuric acid at 150° C., and as being insoluble in, and not visibly swelling in the boiling solvents: ethyl alcohol, diethyl ether, chloroform, xylenes, benzene, toluene, and glacial acetic acid. The specification, as filed, stated in its general description of the process that polymerization takes place spontaneously on condensation of the monomer vapor by cooling and that the cooling may take place in contact with a cool surface on which the polymer is deposited in the form of a film.

4. The description in applicant's application as filed of the product of the applicant's process was inadequate, as stated in the findings of the examiner and the Board of Appeals, in that it contained no description of the intended utility of this product; and the claims in suit which are directed to the process and the product resulting from this process are unpatentable.

5. The amendments to the specification descriptive of the application, proposed by the applicant's letters received in the Patent Office on February 2, 1953, and February 18, 1953, constitute, as stated in the findings of the examiner and the Board of Appeals, new matter, in that

these amendments, to the extent that they attribute a utility to the product, find no sufficient basis in the application as filed. These amendments are new to the application as filed, in that they modify the specifications to state: that the invention relates "particularly to the production of
41 polymer films," that film coatings are produced in the described examples, that the film coatings as so produced can be used wherever protective film coatings possessing the enumerated advantageous properties can be used, and that the polymers produced in the examples were tough and coherent and were easily stripped from the tubular trap to produce self-supporting flexible tubes of polymer.

6. There is no clear proof of mistake in the holding by the Board of Appeals that the specification contains no description of a manner of using the invention.

CONCLUSIONS OF LAW

1. Under 35 U.S.C. 112 the specification of a patent application must contain a "written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention."

2. The law requires that there be in the application an assertion of utility and an indication of the use or uses intended.

3. Plaintiff is not entitled to a patent containing any of the claims 54 or 55 of Szwarc application Serial No. 48,339.

4. The complaint should be dismissed as to all the claims in suit.

/s/ Matthew F. McGuire
Judge

9/15/56

[Filed September 15, 1956]

42 **JUDGMENT**

This action came on to be heard at the last term, and thereupon upon consideration thereof, it is this 15th day of September, 1956

ADJUDGED that the complaint be and it is hereby dismissed, with costs against plaintiff.

/s/ Matthew F. McGuire
JUDGE

[Filed September 25, 1956]

43 **MOTION TO MAKE ADDITIONAL FINDINGS OF FACT**

Under the provisions of Rule 52(b) of the Federal Rules of Civil Procedure, plaintiff moves the Court to make the following additional findings of fact: -

1. The grounds of rejection of the claims in suit by the Patent Office were set forth in the decision of the Patent Office Board of Appeals (Plaintiff's Exhibit 6; Defendant's Exhibit 1, Item C) and included a finding that in this case it would appear impossible to employ the polymer as a coating material.

2. In rejecting the claims in suit, the Board of Appeals of the Patent Office ruled that the disclosure in the application in suit of the formation of a deposit or film of the polymer was not illustrative of the formation of a protective coating.

It is requested that this motion be presented to the Honorable Matthew F. McGuire for decision as provided by Rule 9, Sections (a)(1) and (f), of the Rules of the United States District Court for the District of Columbia.

/s/ Ralph H. Hudson
Attorney for Plaintiff

[Certificate of Service]

[Filed October 18, 1956]

45 **ORDER DENYING PLAINTIFF'S MOTION TO MAKE ADDITIONAL FINDINGS OF FACT**

On motion of the defendant to modify the findings of fact heretofore entered in this proceeding by including additional findings of fact.

Plaintiff's motion to make additional findings of fact is denied.

/s/ Matthew F. McGuire
JUDGE

APPROVED AS TO FORM:
/s/ Ralph H. Hudson
Attorney for Plaintiff

[CERTIFICATE OF SERVICE]

[Filed December 13, 1956]

47 **NOTICE OF APPEAL**

Notice is hereby given that Petrocarbon Limited, the plaintiff above named, hereby appeals to the United States Court of Appeals for the District of Columbia Circuit from the order entered in this case on September 15, 1956, dismissing the complaint.

/s/ Ralph H. Hudson
Attorney for Plaintiff

Washington, D.C.,
December. 1956.

[CERTIFICATE OF SERVICE]